

**METHODS AND SYSTEMS FOR PROVIDING A MEASURE OF SUPERVISION  
OVER THE ACTIVITIES OF REPRESENTATIVES OF A BUSINESS**

Cross-Reference to Co-Pending Patent Applications

5 This Application is related to co-pending U.S. Patent Application Serial No. \_\_\_\_\_, filed \_\_\_\_\_, entitled "Methods and Systems for Assisting Financial Services Firms and Their Representatives" and U.S. Patent Application Serial No. \_\_\_\_\_, filed \_\_\_\_\_, entitled "Methods and Systems for Monitoring the Efficacy of a Marketing Project", both of which are incorporated herein by reference.

Field of the Invention

10 The present invention generally relates to systems and methods for operating a business, and more particularly, to methods and systems for providing a measure of supervision over representatives of a business.

Background of the Invention

15 Representatives are often used to market and/or provide products and services to the customers of a business. Such representatives include, for example, sales representatives, customer support representatives, etc. In some industries, such as the financial service, insurance, and real estate industries, many of the representatives are licensed by an applicable authority. Brokers, insurance agents and real estate agents are just a few examples of such representatives.

20 Licensed representatives are often subject to a variety of rules and regulations, which if not followed, may result in suspension or revocation of the representatives license and/or potential liability for the representative and the representative's firm. For example, in the financial service industry, brokers are typically subject to rules and regulations from a variety of regulatory agencies including, for example, the Securities and Exchange Commission ("SEC"), the Federal Reserve, the various self-regulatory organizations ("SRO"), such as the National Association of Securities Dealers ("NASD") and the New York Stock Exchange ("NYSE"), as well as the Securities Commission in every state where the broker or his firm has customers, has an office, or solicits prospective customers.

For a variety of reasons, many businesses attempt to provide some measure of supervision over the activities of their representatives. Many financial services firms, for example, have a designated supervisor or supervisory group tasked with the responsibility of monitoring the activities of the firm's representatives. While such a supervisory function is desirable, it is often difficult to achieve in practice. To supervise the activities of even a few representatives, for example, the supervisor must often review data from several different sources such as trade tickets, customer related information such as age, customer account activity, etc., and cross-correlate the information manually to determine if the activities of the representatives are in compliance with the applicable rules or standards.

To illustrate the difficulty faced by many supervisors in financial services firms, assume the supervisor wishes to detect unwanted activities relative to older customers. In one example, assume that the supervisor merely wishes to determine if any of the accounts of older customers (e.g. over 65 years of age) have executed more than 5 transactions in any given month. If an older customer account is identified as having more than 5 transactions, the supervisor may wish to follow up with the representative and/or the customer to ensure that the customer's best interests are being met. However, to identify if any of the firm's older customers have executed more than 5 transactions in any given month, the supervisor must often flag each account of the firm that has more than 5 transactions for a given month, and then determine if any of the flagged accounts correspond to older customers (e.g. over 65 years of age). For a firm that has even a few representatives, this task can be difficult, time consuming, and tedious. Similar situations often can occur with other types of firms, such as banks, insurance firms, real estate firms, etc.

What would be desirable, therefore, is a proactive and reactive method and system for helping a firm provide a measure of supervision over the activities of its representatives without requiring a significant amount of manual data sorting and/or cross-correlation.

### Summary of the Invention

The present invention provides methods and systems for helping a business to provide a measure of supervision over the activities of its representatives without requiring a significant amount of manual data sorting and/or cross-correlation. In one illustrative embodiment, this is accomplished by providing a database where each representative records his/her daily activities. For example, in a financial services firm, each representative records his or her activities in a database throughout the course of each day. These activities may be recorded through trade records, current and historical contact records, check deposits, margin balance, etc. The representative may also record personal information about each of his or her customers, including such things as age, investment objective, etc.

To provide a measure of supervision over the activities of the representatives, a number of rules and procedures as well as reports may be defined and/or generated. These rules, procedures and reports may come predefined from a software vendor, and/or they may be defined by a supervisor or supervising group within a firm. Each report may define one or more actual or potentially unacceptable activity using one or more unacceptable activity parameters. In a preferred embodiment, some or all of the unacceptable activity parameters are changeable by the supervisor or supervising group at a later date, such as before each report is run. This may give the supervisor added flexibility in defining and identifying unacceptable activity both proactively and reactively within the firm.

Once defined, each report is preferably run against the database to compare the unacceptable activity parameters defined in the reports against the recorded activities in the database. It is contemplated the all or some of the reports may be run against the database when, for example, prompted by a user, when a particular function is used by a user such as a stock buy function, and/or in a batch mode at any frequency interval desired up to and including real or near real time.

Running the reports against the database preferably produces a listing of alerts. Each alert may identifies an activity that falls within the unacceptable activity parameters defined in the reports. The listing of alerts may be stored in the database for later reference, if desired. From the listing of alerts, the supervisor or supervising group may

perform appropriate follow up activity. The follow up activity may also be recorded in the database for later reference.

Rather than defining one or more actual or potentially unacceptable activities using the unacceptable activity parameters discussed above, it is contemplated that the reports may include one or more acceptable activity parameters. Once defined, each report may then be run against the database to compare the acceptable activity parameters against the recorded activities in the database. Like above, a listing of alerts may be generated and displayed, each identifying only those activities recorded in the database that fall outside of the acceptable activity parameters defined in the reports. From the listing of alerts, the supervisor or supervising group may perform and record the appropriate follow up activity.

#### Brief Description of the Drawings

Figure 1 is a schematic diagram showing the product distribution model commonly used in the financial services industry;

Figure 2 is a schematic diagram showing the architecture of an illustrative system for helping a business provide a measure of supervision over the activities of its representatives without requiring a significant amount of manual data sorting and/or cross-correlation;

Figure 3 is a schematic diagram showing an illustrative user hierarchy in accordance with the present invention;

Figure 4 is a screen shot showing an illustrative window that may be used by representatives of a firm to record his or her daily activities;

Figure 5 is a screen shot showing the illustrative window of Figure 4 with the trade menu expanded;

Figure 6 is a screen shot showing an illustrative window that may be displayed after the "Buy" menu option is selected from the trade menu 262 of Figure 5;

Figure 7 is a screen shot showing an illustrative window that may be displayed after the "Confirm This Trade" button of Figure 6 is selected;

Figure 8 is an illustrative screen shot showing an illustrative Trade Buy Blotter for all representatives of a firm;

Figure 9 is an illustrative screen showing an illustrative Daily Trade Tickets chart for all representatives of a firm;

Figure 10 is a screen shot of an illustrative window that may assist a supervisor in monitoring the activities of a number of representatives of a firm;

5        Figure 11 is a screen shot showing illustrative parameters for an "Equity or Option Trades for Client Date of Birth" report;

Figure 12 is a screen shot showing illustrative parameters for a "Margin Balance versus Equity" report;

10       Figure 13 is a screen shot showing illustrative parameters for an "Employee Activity" report;

Figure 14 is a screen shot showing illustrative parameters for a "1035 Exchange Activity" report;

Figure 15 is a screen shot showing illustrative parameters for a "High Volume Discretionary Activity" report;

15       Figure 16 is a screen shot showing an illustrative window that may be displayed when the hyperlink under the notes column for the "High Volume Discretionary Activity" alert is selected in Figure 10;

Figure 17 is a screen shot showing an illustrative window that may be displayed when the hyperlink under the notes column for the "Equity or Option Trades for Client  
20       Date of Birth" alert is selected in Figure 10;

Figure 18 is a screen shot showing an illustrative window that may be displayed when the "3BR" hyperlink under the "Rep" column for the "Equity or Option Trades for Client Date of Birth" alert is selected in Figure 10;

25       Figure 19 is a flow chart showing an illustrative method for defining a report in accordance with the present invention;

Figure 20 is a flow chart showing an illustrative method for executing the reports;

Figure 21 is a flow chart showing an illustrative method for viewing and following up on alerts identified by reports; and

30       Figure 22 is a flow chart showing an illustrative method for changing the activity that is flagged by adjusting selected parameters in one or more of the reports.

### Detailed Description of the Invention

The present invention is described below primarily with respect to Broker Dealer firms. However, the present invention is equally applicable to other financial services firms including banks, insurance companies, consumer finance organizations, wire houses, etc. More generally, however, the present invention is useful in providing a measure of supervision over the activities of representatives of a wide variety of businesses.

Figure 1 is a schematic diagram showing the distribution model commonly used in the financial services industry to move investment products. The distribution model often begins with the DTCC (Depository Trust Clearing Corporation – formerly NSCC) 10. The DTCC clears a majority of the investment market's equity, debt and mutual fund trades, and also some industry insurance transactions. Financial services who transact business through the DTCC 10, must either be a Clearing Broker Dealer 12 or a correspondent 14 to a Clearing Broker Dealer. Clearing Broker Dealers 12 generally have systems that facilitate trading with the DTCC 10.

The Clearing Broker Dealers 12 may have their own direct sales force, which often includes registered representatives and sales assistants 16 that sell investment product directly to customers. The Clearing Broker Dealers 12 may also have a number of Correspondent Broker Dealers 14a and 14b. Each Correspondent Broker Dealer 14a and 14b may have a number of registered representatives and sales assistants to sell investment product to their customers. Some of the Correspondent Broker Dealers 14 may have Affiliate Broker Dealers, such as Affiliate Broker Dealer 20, which may also have registered representatives and sales assistants for selling investment product to their customers.

Figure 2 is a schematic diagram showing the architecture of an illustrative system for helping a business provide a measure of supervision over the activities of its representatives without requiring a significant amount of manual data sorting and/or cross-correlation. The illustrative system is used in conjunction with financial services firms such as Clearing Broker Dealers 12, Correspondent Broker Dealers 14a and 14b, Affiliate Broker Dealers 20 (see Figure 1), or other financial services firms such as banks, insurance companies, consumer finance organizations, wire houses, etc.

The illustrative system uses a database 30, which is preferably a relational database such as a Microsoft Access<sup>®</sup>, Microsoft SQL Server 2000<sup>®</sup>, Oracle 9i<sup>®</sup>, etc. In some embodiments, the system may also access other databases. Multiple local and/or remote databases may be used by the system, if desired.

5 A broker/dealer interface and control block 32 provides an interface between the database 30 and the users 54A, 54B, and 54C of the system. The users 54A, 54B, and 54C may be any type of user, but in the illustrative embodiment, are registered representatives and/or sales assistants. In a preferred embodiment, the broker/dealer interfacing control block 32 and relational database 30 operate on a server connected to a  
10 number of client systems through the World Wide Web (WWW). The users 54A, 54B and 54C then access the broker/dealer interface and control block 32 from the client systems, as is shown by dashed line 60. The server functions are shown below dashed line 60, while the client functions are shown above dashed line 60.

While the preferred embodiment allows the users 54A, 54B and 54C to access the  
15 broker/dealer interface and control block 32 via the internet, other embodiments are contemplated including allowing the users 54A, 54B and 54C to access the broker/dealer interface control block 32 through an intranet, a LAN, a direct connection, or any other connection mechanism or means. To receive pricing data and to clear trades, the broker/dealer interface and control block 32 may be connected to the DTCC 10 and/or  
20 other services. It is contemplated that these connections may also be via the internet, an intranet, a LAN, a direct connection, or any other connection means.

The relational database 30 may include a number of data files (or entries) to support the activities of users 54A, 54B and 54C. Some illustrative data files (or entries) include customer account data 34, general ledger data 36, securities ledger data 38, trade  
25 blotter data 40, customer correspondence history logs 44, and others 50. The account data file 34 preferably identifies each customer account, and the contents of each account. A customer account may include, for example, a customer account number, current and past holdings of the account, investment objectives of the account, personal information about the customer including the customer's name, address, interests, etc.

30 The general ledger data file 36 preferably stores a general ledger for the broker dealer firm. The securities ledger 38 preferable records each buy and sell executed by



representatives of the broker dealer firm. The trade blotter data file 40 preferably stores each trade executed by representatives of the broker dealer firm. The correspondence history data file 44 preferably records the correspondence history between each representative and their customers.

5           As can be seen, the broker/dealer interface and control block 32 provides an interface that helps each of the users 54A, 54B, and 54C record his/her activities in the relational database 30. The users activities are recorded in, for example, the customer account data file 34, general ledger data file 36, securities ledger data file 38, trade blotter data file 40, customer correspondence history logs 44, and others 50.

10           To provide a measure of supervision over the activities of selected users, a number of supervisory reports may be defined. The supervisory reports, which are preferably also stored in database 30, are shown generally at 64. The reports 64 may be predefined and/or defined by a supervisor or supervising group within a firm. Each report preferably defines one or more actual or potential unacceptable activity by using  
15 one or more unacceptable activity parameters. The unacceptable activity parameters are generally shown at 66. In a preferred embodiment, some or all of the unacceptable activity parameters 66 may be changed by the supervisor or supervising group within the firm. This may give the firm added flexibility in defining and identifying unacceptable activity within the firm.

20           Once defined, each report 64 may be run against the database 30. When each report is run, the unacceptable activity parameters 66 are compared against the recorded activities in the database 30. It is contemplated the all or some of the reports 64 may be run against the database when, for example, prompted by a supervisor or when a representative uses a particular function such as a stock buy function. Alternatively, or in  
25 addition, some or all of the reports 64 may be run automatically in a batch mode at some desired frequency interval including up to real or near real time. Under some circumstances, it may be desirable to run some or all of the reports 64 in batch mode during off-peak hours, which may reduce the load on the database 30 during ordinary business hours.

30           Running the reports 64 against the database 30 may produce a listing of alerts. The listing of alerts are generally shown at 68. Each alert 68 may identify an activity that



falls within the unacceptable activity parameters 66 of at least one of the reports 64. The listing of alerts 68 may be stored in the database 30 for reference, if desired. The supervisor or supervising group may quickly identify the activities that are questionable by simply reviewing the alerts. From the listing of alerts 68, the supervisor or supervising group preferably performs appropriate follow up activity. The follow up activity may be recorded in the database 30 for later reference, such as to support subsequent compliance audits by an applicable authority. The recorded follow up activity is generally shown at 69.

Rather than defining one or more actual or potentially unacceptable activity using the unacceptable activity parameters 66, it is contemplated that the reports 64 may define acceptable activity parameters. Once defined, each report 64 may be run against the database 30 to compare the acceptable activity parameters against the recorded activities in the database 30. Like above, a listing of alerts 68 may be generated. However, in this case, each report may identifying those activities that fall outside of the acceptable activity parameters defined in the reports 64.

In most cases, only certain supervisory users are given rights to define and/or run reports on the database 30. For example, and referring to Figure 2, user 54A may be a designated supervisory user while users 54B and 54C may not. Thus, it may be appropriate for user 54A to have the rights to define and/or run reports on the database 30, while users 54B and 54C may only have the rights to record their activities in the database 30.

Figure 3 is a schematic diagram showing an illustrative user hierarchy that may be helpful in defining the supervisory rights in a typical broker dealer firm. In the illustrative embodiment, Clearing Broker Dealer 12 has a first Correspondent Broker Dealers 14a and a second Correspondent Broker Dealers 14b, similar to that shown in Figure 1. Preferably, representatives from both the Clearing Broker Dealer 12 and the Correspondent Broker Dealers 14a and 14b use the system, and share database 30 (see Figure 2). When so provided, the various users of the system may be placed, at least conceptually, into a hierarchical tree. Those users placed higher in the hierarchical tree may be given access to the accounts and data of the users lower in the hierarchical tree. For example, user 70 of the first Correspondent Broker Dealers 14a may have access to

the accounts and data of users 72a, 72b and 72c. User 70 may be, for example, a representative that manages the first Correspondent Broker Dealers 14a, or otherwise has the responsibility for monitoring the activities of the representatives within the first Correspondent Broker Dealers 14a. Likewise, user 74 of the Clearing Broker Dealer 12  
5 may have access to the accounts and data of users 70, 72a, 72b and 72c of the first Correspondent Broker Dealer 14a, and the users of the second Correspondent Broker Dealers 14b including user 76. User 74 may be, for example, a compliance officer of the Clearing Broker Dealers 12. This user hierarchal structure is preferably achieved by providing an identifier in each user account that identifies those users that are lower (or  
10 higher) in the hierarchical tree structure.

As is known, the financial services industry, as well as other industries, are subject to a vast array of rules and regulations from a variety of regulatory agencies. Because of these rules and regulations, each broker dealer has an obligation to help ensure that all of its representatives follow all of the applicable rules and regulations.  
15 The hierarchical tree structure discussed above may help the broker dealer monitor the activities of its representatives, and in particular, those representative that fall within its responsibility. Thus, and in a preferred embodiment, the hierarchical tree may be structured and correspond to the responsibility assumed by each representative and firm.

Figure 4 is a screen shot showing an illustrative window that may be used by a  
20 representative to record his/her daily activities. The window shows the display after a particular customer account has been selected, namely customer account number "JDEMO". The illustrative window of Figure 4 identifies the particular account at 220, the customer's name and the type of account at 222, the customer's address, phone number and email address at 224, the holdings in the account at 226, the customer's  
25 investment objectives at 228, certain personal information regarding the customer at 230, and recent contact history between the representative and the customer at 232. The window also includes an administrative section 234 and an action section 236, which are further described below.

The holding section 226 identifies the quantity, symbol, date opened, unit price,  
30 net cost, market price, market value, and gain/loss for each holding in the account. Also displayed is the total equity for the selected account. The investment objectives section

228 is set by the representative, preferably after having discussions with the customer. The investment objectives of the customer are important to keep in mind, and are thus readily available and viewable by the representative when the customers account is displayed. Often, decisions about future investments and investment strategies are  
5 evaluated in view of the customers investment objectives.

The personal information shown at 230 provides the representative with a high level snapshot of the customer and the customer's portfolio. The contact history section 232 is used to record the various contacts or discussions between the representative and the customer. This can be important, particularly during a regulatory audit of the firm.  
10 The full contact history between the representative and the customer can be displayed by simply selecting the "View JDEMO's contact history" hyperlink. A new entry in the contact history can be created by simply clicking on the Go button 250.

The administrative section 234 allows the representative to edit account information such as the customer's address or investment objectives. All changes are  
15 preferably time stamped for later reference. The administrative section 234 also allows the representative to edit an open transaction or to perform a number of tasks that are commonly encountered when dealing with customers, such as making a cash deposit. The action section 236 allows the representative to quickly generate various tables or graphs for the benefit of the customer. The action section 236 also includes a trade menu  
20 262 for performing trades in the selected account. Figure 5 is a screen shot showing the window of Figure 4 with the trade menu 262 expanded. In the illustrative embodiment, the trade menu includes buy, cover, sell, sell short, and sell covered menu options.

Figure 6 is a screen shot of an illustrative window that may be displayed after the "Buy" menu option has been selected from the trade menu 262 of Figure 5. The window  
25 shown in Figure 6 accepts a number of fields from the representative. In the example shown, the window accepts a trade type, a symbol or CUSIP, a solicitation status, the location of the shares, a trade date, an amount or number of shares, a price, etc. A notes section 268 is also provided, which allows the representative to record any notes that are pertinent to the trade. Once the representative fills in the appropriate fields, the  
30 representative hits the confirm this trade button 270. Once the representative hits the confirm trade button, the present invention may apply selected rules or procedures to the

trade. For example, if the customer is purchasing the stock on margin, the present invention may apply rules or procedures to identify if the customer has enough margin to buy the specified quantity of stock. In another example, if the customer is selling a position, the present invention may apply rules or procedures to identify if the customer  
5 has sufficient shares to sell. In another example, the present invention may apply rules or procedures to determine if the particular stock is "Blue Sky" in the customer's state of residence. In yet another example, the present invention may apply rules or procedures to identify if the representative is licensed in the customer's state. It should be recognized that these are only illustrative, and many other rules or procedures can be used to  
10 generate reports or alerts and deliver the reports or alerts to the representative in real or near real time. In some embodiments, these reports or alerts may help the representative remain in compliance with the applicable rules and regulations.

It is contemplated that when a report or warning is delivered to the representative, as described above, an over-ride option may also be provided. This may allow the  
15 representative to perform the desired activity regardless of the report or alert. For example, if a customer hand delivers 100 shares of IBM stock, and want the representative to sell the shares, the present invention may provide an alert to the representative that the customer does not have sufficient shares of IBM to sell 100 shares, as these shares may not yet be recorded in the customer database. In this case, it would  
20 be appropriate for the representative to over-ride the report or alert and execute the trade. In some embodiments, a record of the over-ride may be recorded in the database for later reference.

Figure 7 is a screen shot of an illustrative window that may be displayed after the "Confirm This Trade" button 270 of Figure 6 has been selected. This window  
25 summarizes the information provided by the representative in Figure 6. The representative reviews the displayed information and executes the order by selecting the "Execute this Buy Order" button 272. When the "Execute this Buy Order" button 272 is selected, the trade is executed and an entry is made in the firm's trade buy blotter 40.

Figure 8 shows an illustrative Trades Buy Blotter that is preferably maintained by  
30 the system for all representatives of a firm. The Trade Buy Blotter includes buys that occurred between October 1, 2000 to October 31, 2000. The illustrative Trade Buy

Blotter shows the trade date, the settle date, whether the trade was a buy or sell, the account number corresponding to each trade, the particular product or security that was traded, the number of shares traded, whether the trade was solicited or unsolicited by the representative, the buy price per share, the total buy cost, and the buy commission. Each  
5 buy entry shown in Figure 8 is generated by the system when a representative executes a buy trade using the pull down menu shown in Figure 5.

Figure 9 shows an illustrative Daily Trade Tickets chart for all of the representatives of a firm. The Daily Trade Tickets chart shows all trade tickets that were issued between October 1, 2000 and October 31, 2000. The illustrative Daily Trade  
10 Tickets chart shows the trade date, the settle date, whether the trade was a buy or sell, the account number corresponding to each trade, the particular product or investment traded, the number of shares traded, whether the trade was solicited or unsolicited by the representative, the type of trade, the desired price, the report price, and the representatives for each trade.

The Trade Buy Blotter and the Daily Trade Tickets chart of Figures 8-9,  
15 respectively, are used to illustrative some of the ways that a system can record the activities of the representatives of a financial services firm. A further discussion this system can be found in co-pending U.S. Patent Application Serial No. \_\_\_\_\_, filed \_\_\_\_\_, entitled "Methods And Systems For Assisting Financial Services Firms  
20 And Their Representatives", which is incorporated herein by reference.

Figure 10 is a screen shot of an illustrative window that may assist a supervisor in monitoring the activities of a number of representatives of a firm. The illustrative window is generally shown at 300, and includes a report specification region 302, a red  
25 flags region 304, a representative details region 306, an announcements region 308, an activity log region 310, an Investigo portal region 312 which enables efficient access to the customer database by a supervisor, and a firm publications region 314.

The report specification region 302 identifies the reports that are currently available to the supervisor or firm. Some of these reports may be defined by personnel of the firm, provided to the firm by outside vendors, or a combination thereof. In the  
30 illustrative window shown in Figure 10, the report specification region 302 shows eleven reports including an "Equity or Option Trades for Client DOB" report, a "Margin

Balance vs. Equity” report, an “Employee Activity” report, a “1035 Exchange” Report, a  
“High Volume Discretionary Activity” report, a “Mutual Fund Buy/Sells” report, a  
“Large Transaction Size” report, an “Asset Velocity” report, a “Blue Sky Issues” report,  
an “IPO Flipping” report, and a “Short Term Trading Activity” report. It should be  
5 recognized that these reports are only illustrative.

Each report preferably identifies one or more actual or potential unacceptable  
activity that may be performed by representatives of the firm. For example, the “Equity  
or Option Trades for Client DOB” report may identify all accounts that correspond to  
customers that have a date of birth (DOB) before a particular date (e.g. customer is above  
10 a certain age), and has more than “X” trades during a particular time period, where “X” is  
greater than zero. The trades may be equity or option trades in this example, and the  
results may be filtered depending on whether the trades were solicited or unsolicited by  
the representative. This report may be used by a supervisor to monitor and/or detect  
potential unacceptable activity relative to a firm’s older customers.

15 Each report preferably defines one or more actual or potential unacceptable  
activity using one or more unacceptable activity parameters. In a preferred embodiment,  
some or all of the unacceptable activity parameters are changeable by the supervisor or  
supervising group. Figure 11 is a screen shot showing some illustrative unacceptable  
activity parameters for the “Equity or Option Trades for Client Date of Birth” report  
20 discussed above. The illustrative unacceptable activity parameters include a Date of  
Birth, a number of transactions, and whether the trades were solicited or unsolicited by  
the representative. A supervisor or supervising group within the firm may change these  
parameters, as desired, by entering a new value into the appropriate dialog box and  
hitting the corresponding “update” button. In addition, a supervisor or supervising group  
25 within the firm may add or remove parameters, or define different reports, as desired.  
This may give the firm added flexibility in defining and identifying unacceptable activity  
within the firm.

The other reports shown in the report specification region 302 of Figure 10 may  
define other actual or potential unacceptable activity within the firm. In the illustrative  
30 embodiment, the “Margin Balance vs. Equity” report may be used to detect those  
accounts that have an excessive margin balance relative to total equity. Figure 12 is a

screen shot showing some illustrative parameters for the "Margin Balance versus Equity" report. These illustrative parameters include a margin balance percentage, and whether the representative has a discretionary agreement with the customer. A supervisor or supervising group within the firm may change these parameters, as desired, by entering a new value into the appropriate dialog box and hitting the corresponding "update" button, as described above.

The "Employee Activity" report in the report specification region 302 of Figure 10 may be used to detect excessive trading activity by firm employees in a particular stock. Figure 13 is a screen shot showing some illustrative parameters for the "Employee Activity" report. These illustrative parameters include the symbol of the particular stock, as well as a date range. The "1035 Exchange" Report may be used to detect excessive Annuity 1035 Exchange activity. Figure 14 is a screen shot showing some illustrative parameters for the "1035 Exchange Activity" report. These illustrative parameters include the number of 1035 transactions and a date range. The "High Volume Discretionary Activity" report may be used to detect excessive trade activity for accounts that are designated as discretionary. Figure 15 is a screen shot showing some illustrative parameters for the "High Volume Discretionary Activity" report. These illustrative parameters include the number of transactions, a date range, and whether the business was solicited or unsolicited. The "Mutual Fund Buy/Sells" report, "Large Transaction Size" report, "Asset Velocity" report, "Blue Sky Issues" report, "IPO Flipping" report, and the "Short Term Trading Activity" report are just a few other examples of reports that can be defined and used. Other reports may include, for example, a report that identifies those representatives that are the subject of more than, for example, five reports during a 30 day period.

Once the various reports have been defined and the unacceptable activity parameters set, each report (or subset of reports) may be run against the database 30 (see Figure 2). It is contemplated the all or some of the reports may be run against the database when, for example, prompted by a supervisor or when a representative uses a particular function such as a stock buy function. Alternatively, or in addition, some or all of the reports may be run automatically in a batch mode at some desired frequency interval including up to real or near real time. Under some circumstances, it may be



desirable to run some or all of the reports in batch mode during off-peak hours, which may reduce the load on the database 30 during ordinary business hours.

When run, the unacceptable activity parameters are compared against the activities and/or data recorded in the database 30. An alert is then displayed in the red flags region 304 of Figure 10 for each of the activities that falls within the unacceptable activity parameters of the reports. Activities that do not fall within the unacceptable activity parameters are preferably not reported or displayed, thereby eliminating much of the clutter that might otherwise exist. The listing of alerts may be stored in the database 30 for later reference, if desired.

Each alert in the red flag region 304 preferably identifies selected high level information that might be of interest to a supervisor when reviewing the alerts. In the illustrative embodiment, each alert displays the representative that is associated with the activity, a description of the alert which in the embodiment shown corresponds to the title of the report that identified the activity, the date of the alert, the current status of the alert, and any notes that have been recorded for the alert.

Some of the information provided in the alert may be in the form of a hyperlink. For example, the representative identifier (e.g. "3BR") shown in the second to last alert of Figure 10 may be in the form of a hyperlink, which when selected, may display a representative profile for the representative "3BR". One such representative profile is shown in Figure 18, and it includes the representatives name, address, affiliate firm, licensure information, as well as other information. Although not shown, a log of questionable activity may be maintained for each representative, and displayed in the representative profile if desired. This may help a supervisor or the like identify those representatives that are more likely to be involved in unacceptable activity. The log itself may be searched to identify, for example, all representatives that have been the subject of more than five (5) alerts in the past year.

The description of the alert may also be in the form of a hyperlink. For example, the description of the alert "Equity or Option Trades for Client DOB" shown in the second to last alert may be in the form of a hyperlink, which when selected, may display the accounts of representative "3BR" that meet the unacceptable activity parameters of the "Equity or Option Trades for Client DOB" report shown in Figure 11.

From the listing of alerts, a supervisor or the like may review and perform appropriate follow up activity, as desired. The supervisor preferably records his or her follow up activity in the database in the "notes" field. The "notes" field for each alert may also be in the form of a hyperlink, as shown. In the example shown, the notes field for the alert "Equity or Option Trades for Client DOB" is in the form of a hyperlink, which when selected, displays the notes that have been recorded, if any. For the "Equity or Option Trades for Client DOB" alert of Figure 10, the default phrase "None" is displayed in the notes field. After following up on the "Equity or Option Trades for Client DOB" alert, however, the supervisor may click on the "None" hyperlink to add a note to the notes column.

The "High Volume Discretionary Activity" alert of Figure 10 already has a note added to the notes column. Another note may be added to the notes column by clicking on the last note, or in this example, the "Instructed the Rep to dis..." hyperlink. When the last note is selected, the notes dialog box shown in Figure 16 is preferably displayed. The notes dialog box allows a supervisor to add another note by selecting the "Add a new Note Entry" button 400. The add noted dialog box also preferably allows a supervisor to change the status of an alert, by selecting a new status from the status pull down menu 402. Figure 17 shows the notes dialog box for the "Equity or Option Trades for Client DOB" alert of Figure 10, with the "status" pull down menu expanded.

Initially, the status of each alert is set to "Not Yet Reviewed" as the default value. When the status of an alert is still "Not Yet Reviewed", the alert is highlighted in a designated color (shown shaded in Figure 10) in the red flags region 304 of Figure 10. This allows the supervisor to immediately identify those alerts that have not yet been reviewed. After the alert is reviewed, the supervisor preferably changes the status of the alert to one of a number of other status categories. As shown in Figure 17, the status of an alert may be changed to "Reviewed, No Action taken", "Reviewed, Action Pending", "Reviewed, Action Taken", and "Forwarded on for Review". Once the status of an alert is changed from "Not Yet Reviewed", the alert is no longer highlighted in the designated color in the red flag region 304 of Figure 10.

In addition to the reports discussed above, Figure 10 also provides access to information that may allow a supervisor to proactively check for various compliance

issues. For example, when a supervisor clicks on a hyperlink corresponding to a representative, or selects the view rep profile button, the representative profile may be displayed, as shown in Figure 18. The representative profile may show the states in which the representative is licensed. The supervisor may check for trade activity that is conducted in states outside of the representatives licensed states. If desired, reports may be defined to detect these and other compliance issues.

The activity log region 310 of Figure 10 allows a supervisor to assemble and view all alerts that generated a red flag, as well as all follow up activity, during the specified time period. For example, by clicking on the "Weekly" hyperlink in the activity log region 310, the supervisor may view all alerts that generated a red flag, as well as all follow up activity, that occurred during the past week. In addition, it is contemplated that a search function may be provided, allowing the supervisor to identifying selected alerts. The search function may include one or more fields for searching by, for example, all alerts associated with designated representative, all alerts that relate to short term trading, etc.

The a firm publications region 314 preferably allows a supervisor to view compliance related materials. In the illustrative embodiment, hyperlinks are provided to a firm compliance manual, an NASD manual, a policy and procedures document, and an account document. Other compliance related materials may also be included. The supervisor may access any of the compliance related materials by simply clicking on the appropriate hyperlink. Preferably, the system records when each supervisor views or accesses the compliance related materials.

Rather than defining one or more actual or potentially unacceptable activities using the unacceptable activity parameters, it is contemplated that the various reports may include one or more acceptable activity parameters. Once defined, each report may be run against the database 30 to compare the acceptable activity parameters against the recorded activities in the database 30. Like above, a listing of alerts may be generated, each identifying only those activities recorded in the database that fall outside of the acceptable activity parameters defined in the reports.

As noted above with respect to Figure 3, some industries have a hierarchical structure or form. To support this structure, it is contemplated that the present invention

may allow each supervisor to create his/her own reports, and/or maintain his/her unique report parameters. This may allow each supervisor to monitor different activities or provide different alert levels, as desired.

Figure 19 is a flow chart showing an illustrative method for defining a report in accordance with the present invention. The method is entered at step 500, wherein control is passed to step 502. Step 502 defines a report objective. The report objective preferably identifies at least some form of unacceptable activity. Once the report objective is defined, one or more unacceptable activity parameters are defined, as shown at step 504. The unacceptable activity parameters are preferably chosen so that the unacceptable activity identified in the report objective of step 502 can be identified by comparing the unacceptable activity parameters against recorded activities in the database 30. At least some of the unacceptable activity parameters may be changeable by the user, as desired. Once the unacceptable activity parameters are defined, a corresponding report is created, as shown at step 506.

Figure 20 is a flow chart showing an illustrative method for executing the reports created in Figure 19. The method is entered at step 600, and control is passed to step 602. Step 602 determines if it is time to execute the reports. As indicated above, it is contemplated the all or some of the reports may be run against the database when, for example, prompted by a supervisor or when a representative uses a particular function such as a stock buy function. Alternatively, or in addition, some or all of the reports may be run automatically in a batch mode at some desired frequency interval including up to real or near real time. Under some circumstances, it may be desirable to run some or all of the reports in batch mode during off-peak hours, which may reduce the load on the database 30 during ordinary business hours.

If it is not yet time to execute the reports, control is passed back to step 602, as shown at 603. If it is time to execute the reports, control is passed to step 604. Step 604 runs a first/next report against the database 30. Step 606 stores any alerts found by the first/next report. Step 608 determines if there are any more reports to run. If there are more reports to run, control is passed back to step 604. If there are no more reports to run, control is passed to step 610, wherein the algorithm is exited. While the flow chart

of Figure 20 illustrates the serial execution of the various reports, parallel execution may also be used, as desired.

Figure 21 is a flow chart showing an illustrative method for viewing and following up on alerts identified by the reports of Figure 20. The method is entered at step 700, wherein control is passed to step 702. Step 702 allows a user to view a number of alerts, preferably those alerts generated by executing the reports in accordance with Figure 20. Step 704 allows the user to select one of the alerts. Step 706 allows the user to follow up on the selected alert, and step 708 allows the user to record any follow up activity that relates to the selected alert. Step 710 determines if there are any more outstanding alerts. If there are no more outstanding alerts, control is passed to step 714, wherein the algorithm is exited. If there are more outstanding alerts, control is passed to step 712. Step 712 determines if the user wants to continue or quit. If the user wants to continue, control is passed back to step 704. If the user wants to quit, control is passed to step 714, wherein the algorithm is exited.

Figure 22 is a flow chart showing an illustrative method for changing the activity that is flagged by various reports by adjusting selected parameters in one or more of the reports. The method is entered at step 800, and control is passed to step 802. Step 802 allows a user to evaluate a number of alerts that are generated by a number of reports. At least some of the reports preferably have one or more report parameters, and in a preferred embodiment, one or more unacceptable activity parameters. Step 804 allows the user to change selected report parameters. This can be accomplished by, for example, using one of the "update" buttons of Figures 11-15 described above. By allowing some or all of the unacceptable activity parameters to be changed by the supervisor or the like, more flexibility can be realized in defining and identifying unacceptable activity within a firm or organization.

Having thus described the preferred embodiments of the present invention, those of skill in the art will readily appreciate that the teachings found herein may be applied to yet other embodiments within the scope of the claims hereto attached.